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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,867	10/30/2003	George Paskalov	100798.0008US1	2026

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03/26/2007

EXAMINER

WONG, EDNA

ART UNIT	PAPER NUMBER
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1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/698,867

Applicant(s)

PASKALOV ET AL.

Examiner

Edna Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date February 2, 2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Election/Restrictions

Applicant's election without traverse of Group III, claims **12-19**, in the reply filed on February 13, 2007 is acknowledged.

The requirement is still deemed proper and is therefore made FINAL.

Accordingly, claims **1-11** are withdrawn from consideration as being directed to a non-elected invention.

Specification

The disclosure is objected to because of the following informalities:

page 1, line 4, the word "priority" should be amended to the word -- benefit --.

page 4, line 19, the words -- (not shown) -- should be inserted after the number "132".

page 4, line 19, the words -- (not shown) -- should be inserted after the number "134".

Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **12-14 and 18** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Laroussi** (US Patent No. 5,876,663).

Laroussi teaches a method of reducing biological contamination in a waste, comprising:

(a) providing an RF plasma wave generator (= the plasma is generated by applying RF voltage between two electrodes) [col. 2, lines 14-34]; and

(b) carrying the waste (col. 2, lines 35-44) past waves produced by the RF plasma wave generator (col. 3, lines 30-37; and Fig. 1) under conditions in which

a substantial percentage of the population of a microbe (= microorganisms) in the waste is inactivated or killed (= kill), to produce a treated waste (= sterilized) [col. 2, lines 45-55].

The substantial percentage is at least 50% (= kill or render inviable *all* microorganisms present in the liquid) [col. 1, lines 26-32].

The substantial percentage is at least 90% (= kill or render inviable *all* microorganisms present in the liquid) [col. 1, lines 26-32].

The step of providing an RF plasma wave generator comprises operating the generator at a basic frequency of 0.44 MHz-40.56 MHz (= 1 to 50 kHz) [col. 3, lines 63-65].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

I. Claims **15 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Laroussi** (US Patent No. 5,876,663) as applied to claims 12-14 and 18 above, and further in view of **Ubelhor** (US Patent No. 6,379,539 B1).

Laroussi is as applied above and incorporated herein.

The method of Laroussi differs from the instant invention because Laroussi does

not disclose the following:

a. Wherein the method further comprises discharging the treated waste into a navigable body of water, as recited in claim 15.

b. Wherein the step of carrying the waste past the waves is carried out upon a ship, as recited in claim 20.

Laroussi teaches **water treatment systems of** municipalities and **other locations** can be treated and sterilized (col. 2, lines 8-12).

Like Laroussi, Ubelhor teaches treating water to remove impurities. Ubelhor teaches a water treatment system **10** resident on a boat **18** and the freshwater source is a lake or river that is accessible to through the water inlet line **20** of the boat **18** (col. 5, lines 6-10; and Fig. 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by discharging the treated waste into a navigable body of water; and carrying the waste past the waves is carried out upon a ship because for those regions or countries wherein the government cannot afford or chooses not to provide, regulate and maintain a system to treat water to provide drinking water, it would have been desirable to provide a system and method whereby water from freshwater sources, such as lakes, streams, ponds, rivers, etc., can be accessed and treated to provide safe drinking water as taught by Ubelhor (col. 1, lines 23-30).

II. Claims **16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Laroussi** (US Patent No. 5,876,663) as applied to claims 12-14 and 18 above
Laroussi is as applied above and incorporated herein.

The method of Laroussi differs from the instant invention because Laroussi does not disclose the following:

- a. Wherein the method further comprising discharging the treated waste into a sewer, as recited in claim 16.
- b. Wherein the method further comprises discharging the treated waste into a conduit in a municipal waste treatment plant, as recited in claim 17.

Laroussi teaches ***water treatment systems of municipalities*** and other locations can be treated and sterilized (col. 2, lines 8-12).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by discharging the treated waste into a sewer; and discharging the treated waste into a conduit in a municipal waste treatment plant because Laroussi teaches sterilizing sewage (col. 2, lines 40-44).

III. Claim **19** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Laroussi** (US Patent No. 5,876,663) as applied to claims 12-14 and 18 above.

Laroussi is as applied above and incorporated herein.

The method of Laroussi differs from the instant invention because Laroussi does not disclose wherein the step of providing an RF plasma wave generator comprises

operating the generator at a modulation frequency of 10-35 kHz, as recited in claim 19.

Laroussi teaches that one skilled in the art will understand that the parameters are interrelated and will be able to select appropriate values of these parameters based on the teaching of his specification (col. 4, lines 36-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the step of providing an RF plasma wave generator described by Laroussi with wherein the step of providing an RF plasma wave generator comprises operating the generator at a modulation frequency of 10-35 kHz because the modulation frequency is a result-effective variable and one skilled in the art has the skill to calculate the modulation frequency that would have determined the success of the desired reaction to occur, dependent upon the plasma forming gas and the kind of microorganism that is being killed (MPEP § 2141.03 and § 2144.05(II)(B)).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

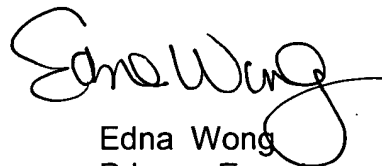
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Edna Wong", with a stylized flourish at the end.

Edna Wong
Primary Examiner
Art Unit 1753

EW
March 22, 2007